Technology in Rural Transportation

A recent study documented more than eighty proven, cost-effective, "low-tech" solutions to rural transportation needs, most developed or implemented by local transportation professionals. One of these solutions is outlined below:

Learn all about the simple solutions on the Internet at http://inform.enterprise.prog.org

The simple solutions report is available from Hau To at (503) 892-2533, or email: to@crc-corp.com

AVL on Agency Vehicles

Overall goal:	To locate vehicles for improved fleet management of agency vehicles. The AVL component of ARTIC is part of the overall goal to coordinate and integrate the communication between various public agencies.
Technical approach:	GPS equipment is installed on fleet vehicles to allow for quick location identification and deployment. ARTIC also uses mobile data terminals (MDTs) for the ability to send data between the vehicle and dispatching center for increased communication capabilities.
Current status:	Currently, plans are underway to continue expanding application of the system for State Patrol and Mn/DOT, provide for automated transfer of accident location from GPS to accident reporting software, and to expand radio service from Little Fork through the ARTIC Communication Center to the Gilbert Transit Center.
Location / geographic scope:	Arrowhead Region (Minnesota District 8)
Agencies involved:	Minnesota State Patrol, Mn/DOT, Arrowhead Transit, City of Virginia Dial-a-ride, FHWA, US West Communications
Cost information:	Total budget $1.8M; expenditures to date $1.5M. GPS equipment is currently available from multiple suppliers with costs ranging from $300 to $40,000.
Key contacts:	Dick Maddern, District 8 Virginia, (218) 749-7793 ext. 3804, richard.maddern@dot.state.mn.us

U.S. Department of Transportation
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Have goals been achieved?	Yes. Success of the interagency cooperative endeavor has spurred interest in creating 9 statewide rural/small urban transportation operation and communication centers as well as reductions in response time for accident and road condition emergencies through combining DOT and public safety dispatching.
Solution timeline:	The operational test started in October 1997 and ran through September of 1998. AVL and MDT are functional on 15 Mn/DOT vehicles, 4 Minnesota State Police vehicles, and 15 transit buses. An interface was developed between the MDTs and the sand spreader control on the plow trucks to demonstrate downloading of spreader information to the communications center.

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